

“A STUDY TO ASSESS THE POLY CYSTIC OVARIAN SYNDROME (PCOS) RISK STATUS AND TO EVALUATE THE EFFECTIVENESS OF AN AWARENESS PROGRAMME ON KNOWLEDGE REGARDING PCOS AND ITS MANAGEMENT AMONG ADOLESCENT GIRLS IN SELECTED COLLEGE AT MYSURU”.

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ABSTRACT: The aim of the study is to assess the Poly cystic ovarian syndrome (PCOS) risk status and to evaluate the effectiveness of an awareness programme on knowledge regarding PCOS and its management among adolescent girls in selected college at Mysuru. Research design adopted for the study was pre-experimental - one group pretest post-test design. Purposive sampling technique was used to select 100 adolescent girls for the study. Risk assessment check list was to assess risk status and structured knowledge questionnaire was used to assess knowledge regarding PCOS and its management. Pilot study was conducted, tool and the study design was found to be feasible. Findings of the study revealed that the majority of adolescent girls 56% had moderate risk for PCOS. The results of the study also revealed significance difference between the mean pretest and mean posttest knowledge scores which was statistically tested using paired 't' test and it was found to be significant at 0.05 level of significance $t=17.25$, $p<0.05$ and the results also depicted that knowledge of adolescent girls regarding PCOS and its management had partial association with their selected personal variables. It was concluded that an awareness programme was effective in increasing the knowledge of adolescent girls regarding PCOS and its management. Therefore, the study recommends that, it is essential to organize health campaigns and awareness programmes to enhance the knowledge regarding PCOS and its management among adolescent girls.

Keywords: Effectiveness, adolescent girls, awareness Programme, knowledge.

INTRODUCTION:

Adolescence might be described in many ways. It is the transition from childhood to adulthood and so it is not a smooth one. During this period one doesn't know about their physical and mental development, because it is new to one's life during that stage. In addition to this intellectual and emotional upheaval, rapid body growth causes them anxiety and cultural pressures of today's world add further stress to their uncertainty.¹

The adolescent period is characterized by its age. It is deferent from individual to individual, it depends on its health condition, together with increasing demands and are influenced by peers, school and wider society. It is well documented that behaviors developed during this period influence health in adulthood. Several health

compromising behaviors (e.g. smoking, alcohol) as well as health enhancing behaviors (e.g. physical exercise) is adopted in adolescence and they often persist into adulthood.² Ten to twenty percent of the world population comprises adolescents and their problems have not been fully appreciated and addressed until recent time.¹

Most women are diagnosed with PCOS during their twenties or thirties, but PCOS may affect girls as young as 11 years who haven't even had their first period.³ PCOS affects 8 to 20% of reproductive-age women worldwide³. WHO estimates PCOS affects 116 million women worldwide.⁴ One in every ten women in India has polycystic ovary syndrome (PCOS), a common endocrinal system disorder among women of reproductive age, according to a study by PCOS Society and out of every ten women diagnosed with PCOS, six are teenage girls.⁵

In studies conducted in South India and Maharashtra, prevalence of PCOS was reported as 9.13 % and 22.5% respectively.⁵ India has witnessed about 30% rise in PCOS cases in the last couple of years. In Karnataka, incidence of PCOS among adolescent is estimated to be 11-26%.⁶ Polycystic ovarian syndrome (PCOS) requires a prompt diagnosis, which requires the presence of two of the following three conditions. i) Oligo and /or anovulation for more than 6 months ii) polycystic ovaries in ultrasound iii) clinical/ biochemical evidence of hyperandrogenism. Estimations of prevalence of PCOS depend on the population being assessed, as there are ethnic differences in the clinical and biochemical features of PCOS.⁵

Girls with PCOS typically have irregular periods or amenorrhea, and heavy or scanty bleeding during menses. They will have elevated levels of the male hormone androgen (testosterone) and polycystic ovaries. Women with PCOS can develop cysts due to ovaries not being released on time. The follicles keep growing and form multiple cysts, which appear like “a string of pearls”. Women are likely to develop PCOS if their mother or sister also has the condition.⁵

Not just that, women with PCOS have a higher risk of developing other health complications such as hypertension, high cholesterol, anxiety and depression, sleep apnea, heart attack, diabetes and endometrial, ovarian and breast cancer. Women who have PCOS have a higher rate of miscarriage, gestational diabetes, and premature delivery.⁵ Many aspects of the disorder are not understood properly as its symptoms and severity vary greatly. Unfortunately, PCOS cannot be cured. It can, however, be managed to a large extent by controlling symptoms. Exercise and a healthy diet are the best bet for women with PCOS as this will help to regulate their menstrual cycle and lower blood glucose levels.⁵

OBJECTIVES

1. To assess Poly Cystic Ovarian Syndrome risk status among adolescent girls.
2. To assess level of knowledge regarding PCOS among adolescent girls.
3. To determine the effectiveness of an awareness programme regarding PCOS and its management among adolescent girls.
4. To find the association between level of knowledge regarding PCOS and its management among adolescent girls and their personal variables.

HYPOTHESES

H₁: Mean post test knowledge score will be significantly higher than mean pre test knowledge Score regarding PCOS and its management among adolescent girls.

H₂: There will be significant association between the level of knowledge of adolescent girls regarding PCOS and its management with their selected personal variables.

RESEARCH METHODOLOGY

Research design adopted for the study was pre-experimental - one group pretest post-test design. Purposive sampling technique was used to select 100 adolescent girls for the study. Risk assessment check list was to assess risk status and structured knowledge questionnaire was used to assess knowledge regarding PCOS and its management.

DATA COLLECTION PROCEDURE

Formal administrative permission for conducting the study was obtained from the JSS Degree College Mysuru. Ethical clearance for conducting the study was obtained from the ethical committee of the JSS college of Nursing. To obtain a free and true response, the respondents were explained about the purpose and usefulness of the study and cooperation required from the respondents was explained to them. Confidentiality was assured. An informed consent was obtained from each sample indicating their willingness to participate in the study. Data collection was done from 06/03/2019 to 20/03/2019.

On day one adolescents who met the inclusion criteria were selected and written consent was obtained. And assessed the risk status of adolescent girls using risk assessment tool and Pre-test was conducted using structured knowledge questionnaire followed by the planned teaching programme for 45 minutes on the same day. On day 8, post test was conducted using structured knowledge questionnaire. Approximately 15-20 minutes was taken by the adolescents for completing structured knowledge questionnaire.

DATA COLLECTION TOOL

1. Description of Proforma for personal variables

This section includes the basic information about adolescent girls viz. age, age at menarche, educational qualification, religion, family income per month, Dietary pattern, Place of residence, Source of information regarding PCOS and any previous exposure to educational programme regarding PCOS and its management.

2. Description of risk assessment tool

This section includes check list to assess PCOS risk. For every "YES" response score ONE will be given and for "NO" response score ZERO will be given. Total score ranges from 0 -15. Score is arbitrarily divided as, 0-5 Low risk, 6-10 Moderate risk, 11-15 High risk

3. Description of structured knowledge questionnaire:

The structured knowledge questionnaire was developed by the investigator with the intention to assess the knowledge of adolescent girls regarding PCOS and its management. The steps adopted for the selection of items and preparation of the questionnaire was:

- 1) Review of research literature related to PCOS and its management.
- 2) Expert's opinion and suggestions to decide on the areas to be included.
- 3) Preparation of blue print.

Blue print was prepared with the knowledge items divided under the headings: Anatomy and Physiology of ovary, Meaning and incidence of PCOS, Causes and risk factors of PCOS, Signs and Symptoms,

Pathophysiology of PCOS, Diagnostic evaluation of PCOS, Complication of PCOS and Prevention and management of PCOS.

Structured knowledge questionnaire in English was translated to Kannada and the Kannada tool validation was done. Structured knowledge questionnaire consists of 30 questions to assess the knowledge of adolescent girls regarding PCOS and its management. Each question has four alternatives answers. The correct answer carries one mark and the wrong answer carries zero mark. The maximum score is 30 and the minimum score is zero. The total score ranges from 0 to 30, which is further arbitrarily divided into three level of knowledge.

- Less than 15 -- Poor knowledge
- 15-23 -- Average knowledge
- More than 23 -- Good knowledge

RESULTS: SECTION I

DESCRIPTION OF SELECTED PERSONAL VARIABLES OF STUDY SUBJECTS

TABLE 1

Frequency and percentage distribution of adolescent girls according to their selected personal variables
n=100

Sl.no	Sample characteristics	Frequency	Percentage (%)
1	Age in years		
	1.1 17	20	20%
	1.2 18	37	37%
	1.3 19	43	43%
2	Age at menarche in years		
	2.1 11-13	53	53%
	2.2 14-16	47	47%
3	Educational qualification		
	3.1 1 st year Degree	42	42%
	3.2 2 nd year Degree	58	58%
4	Religion		
	4.1 Hindu	85	85%
	4.2 Muslim	04	04%
	4.3 Cristian	07	07%
	4.4 Others	04	04%
5	Monthly family income in rupees		
	5.1 <5000	17	17%
	5.2 5001-10000	39	39%
	5.3 10001-15000	24	24%
	5.4 >15000	20	20%
6	Dietary pattern		
	6.1 Vegetarian	42	42%
	6.2 Mixed	58	58%
7	Place of residence		
	7.1 Rural	38	38%
	7.2 Urban	62	62%

8	Source of information about PCOS		
	8.1 Family members/Relatives	41	41%
	8.2 Health personal	15	15%
	8.3 Mass media	44	44%

The data presented in **Table 1** shows that, majority 43% adolescent girls were in the age group of 19 years, 37% in the age group of 18 years and 20% in the age group of 17 years. Majority 53% adolescent girls were attained menarche at the age of 11-13 and 47% adolescent girls attained at 14-16 years of age. Majority 58% of adolescent girls were doing their 2nd year Degree and 42% of adolescent girls were in 1st year Degree students. Majority 85% adolescent girls were from Hindu religion, 07% were Cristian, 04% were Muslim and 04% of adolescent girls were from other religions. Majority 39% of adolescent girls had their family income between Rs 5000-10000 per month, 24% had their family income between Rs 10001-15000 per month, 20% had their family income Rs <15000 per month and 17% had their family income below 5000 per month. Majority 62% of adolescent girls were residing in Urban area where as 38% of were from Rural area. Majority 58% of adolescent girls were taking mixed diet and 42% of were Vegetarians. Majority 44% of adolescent girls were getting information from mass media 41% from family members/Relatives and 15% from health personnel.

SECTION 2

PCOS RISK STATUS AMONG ADOLESCENT GIRLS

TABLE 2

Frequency and percentage distribution of adolescent girls according to their risk status

PCOS risk status	Frequency (f)	Percentage (%)
Low risk	16	16
Moderate risk	56	56
High risk	28	28

n=100

Scoring: 0-5 Low risk, 6-10 Moderate risk, 11-15 High risk

Data presented in **Table 2** shows that majority of adolescent girls 56% were having moderate risk for PCOS, 28% had high risk where as 16% had low risk for PCOS.

SECTION 3

EFFECTIVENESS OF AN AWARENESS PROGRAMME REGARDING PCOS AND ITS MANAGEMENT AMONG ADULOSCENT GIRLS.

I. Frequency and percentage distribution of adolescent girls according to their knowledge

TABLE 3

Frequency and percentage distribution of level of knowledge of adolescent girls according to their pre-test and post-test scores.

n=100

Knowledge level	Pre test		Post test	
	Frequency	Percentage(%)	Frequency	Percentage(%)
Poor knowledge	59	59	00	00
Average knowledge	41	41	53	53
Good knowledge	00	00	47	47

It is evident from **Table 3** that, majority of them 59% had poor knowledge and 41% had average knowledge in the pre-test. Data also revealed that in the post test majority, 53% had average knowledge and 47% of them had good knowledge regarding PCOS and its management among adolescent girls.

II. Mean, median, range and standard deviation of knowledge scores

TABLE 4

Mean, Median, Standard deviation, Range of pre-test and post-test knowledge score of adolescent girls. n=100

Test	Mean	Median	Range	SD
Pre test	15.35	14	11-21	±2.61
Post test	22.7	23	17-28	±3.32

The data presented in **Table 4** shows that, the pre-test knowledge score ranged from 11-21 and the post-test knowledge score ranged from 17-28. The mean pre-test knowledge score is 15.35 with standard deviation of ±2.61 and the mean post-test knowledge score is 22.7 with the standard deviation of ±3.32.

III. Significance of difference between the pre-test and post-test knowledge scores regarding PCOS and its management among adolescent girls.

TABLE 5

Mean, mean difference, standard deviation difference, standard error and paired 't' value of pre-test and post knowledge scores of adolescent girls.

Knowledge scores	Mean	Mean Difference	S.D. Difference	Standard Error	Paired 't' test value
Pre-test	15.35				
Post-test	22.7	7.35	±0.71	0.071	17.25*

n=100

$t_{(99)} = 1.98$; $p < 0.05$ * significant.

The data presented in the **Table 5** shows that the mean difference between knowledge of pre test score and post test score is 7.35. To find the significant difference in mean knowledge scores, paired 't' test was computed and obtained value of paired 't'=17.25*, $p < 0.05$ is found to be significant. Therefore, the null hypothesis is not accepted. Hence it is inferred that, there is significant difference between mean pre-test and mean post-test knowledge scores of adolescent girls regarding PCOS and its management.

LIMITATIONS

The limitations of the present study were,

1. Study is limited to adolescent girls in selected colleges in Mysuru.
2. Study is limited to adolescent girls between the age group of 17-19 years.
3. The study is limited to assessment of knowledge of adolescent girls.

RECOMMENDATIONS

1. Similar study can be carried out on a larger sample for broader generalization.
2. Similar studies can be conducted to assess the effectiveness of other interventions.
3. A similar study can be conducted by adopting true experimental design.

CONCLUSION:

Findings of the study revealed that the majority of adolescent girls 56% had moderate risk for PCOS. The results of the study also revealed significance difference between the mean pretest and mean posttest knowledge scores which was statistically tested using paired' test and it was found to be significant at 0.05 level of significance 't' =

17.25, $p < 0.05$ and the results also depicted that knowledge of adolescent girls regarding PCOS and its management had partial association with their selected personal variables. It was concluded that an awareness programme was effective in increasing the knowledge of adolescent girls regarding PCOS and its management. Therefore, the study recommends that, it is essential to organize health campaigns and awareness programmes to enhance the knowledge regarding PCOS and its management among adolescent girls.

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